

MARINE CORPS WARFIGHTING LABORATORY

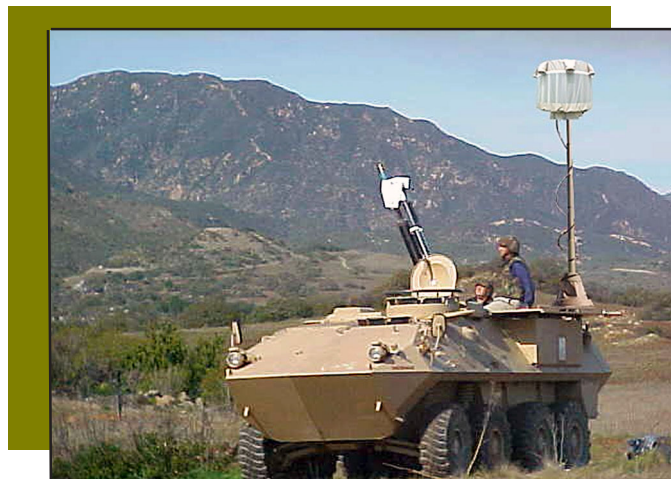
Dragon Fire II: The second generation of the original Dragon Fire automated firing system concept demonstrator, building on the successes of that system. Dragon Fire II will be ready for live-fire testing as a towed airmobile and LAV self-propelled system in CY 2005.

Background: The Dragon Fire experimental system was developed to explore automation for artillery. It successfully demonstrated that automation could be reliable and materially improve precision and responsiveness. The Dragon Fire was also integrated into an LAV chassis to form a modular artillery system that allowed commanders to tailor artillery mobility to tactical requirements. The 120mm rifled mortar tube and ammunition proved to be accurate and capable and also permitted the effective use of standard smoothbore mortar ammunition. Coupled with the 6400-mil traverse and computer-controlled aiming, the original Dragon Fire proved to be a very effective weapon; however at 7,000 pounds it was deemed too heavy for practical purposes. Dragon Fire II, will be much lighter and faster and will allow more advanced experimentation yet. It also has the characteristics being sought for the US Army Counter Rockets, Artillery, and Mortars (C-RAM) project: speed of reaction, digital communications, networking, precision, and a 6400-mil traverse. One version that is being proposed has the Lightweight Countermortar Radar (LCMR) is mounted on an extendable mast from the LAV-mounted Dragon Fire II. This concept will allow very rapid detection of enemy firing systems and equally rapid attack of those firing systems by the Dragon Fire; essentially a mobile version of C-RAM. Many of the technologies being tested in the Dragon Fire II will have application to the spiral development of the Expeditionary Fire Support System (EFSS) program and the Light Armored Vehicle – EFSS program.

Description: Dragon Fire II uses advanced technology materials and design to lower the overall weight of the system to a planned 4,000 pounds. It will use electric actuators for faster response and more consistent weapon pointing. In the event automatic systems fail, Dragon Fire II has manual backups for continued mission support. The fire control computer system has been entirely redesigned to use the army M95 Mortar Fire Control System (MFCS) as its basis, allowing digital communication with the Advanced Field Artillery Tactical Data System (AFATDS). Dragon Fire II is designed to fit within the MV-22 Osprey and to be towed by any available military vehicle. Whether it is being employed as a towed weapon or as a self-propelled, LAV-based weapon, Dragon Fire II will be capable of full-time navigation, communication, and networking within the fires coordination system. Dragon Fire II is capable of acting as the master system in planning fires, passing safety information and locations, fires coordination measures, and controlling subordinate Dragon Fire II weapons for rapid and efficient fire support implementation.

DRAGON FIRE II

fact sheet



Proven benefits of the Dragon Fire II:

- Entirely self-contained: on-board fire control computer, communication, navigation, and orientation system. No need for additional teams, equipment to provide fire support.
- Modular deployment options for fire support: air deployable as towed system, yet rapidly transformable to self-propelled system.
- Most precise possible artillery system: advanced ballistic solution, on-board muzzle velocimeter, precise positioning and aiming.
- Exceptionally responsive: capable of receiving fire mission, aiming, loading, and firing in any direction in 12 seconds or less.
- Capable of firing ALL types of rifled and smoothbore 120mm mortar ammunition.

Deliverable Products:

- One Dragon Fire II concept demonstrator system with modified Light Armored Vehicle mortar carrier (LAV-M).
- Advanced fire control and other technologies for transition to Programs of Record
- Potential dedicated counterfire system for Afghanistan and Iraq
- Potential LAV-EFSS candidate system

info: Public Affairs Office: (703) 784-5170
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3255 MEYERS AVENUE
QUANTICO, VA 22134
WWW.MCWL.QUANTICO.USMC.MIL